

PTO/SB/08 (10-01)

Approved for use through 10/31/2002. OMB 0651-0031  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/APTO		<b>Complete if Known</b>		
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	09/95,897	
		Filing Date	November 28, 2001	
		First Named Inventor	Pierre Mourad, et al.	
		Art Unit	3737	
		Examiner Name	All Imam	
Sheet		of	Attorney Docket Number	12500.2001U

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US-6,328,894	Dec-11-2001	Michaeli, David	
		US-6,117,089	Sept-12-2002	Sinha, Dipen N.	
		US-6,110,114	Aug-29-2000	Nock et al.	
		US-6,042,545	Mar-28-2000	Hossack et al.	
		US-			
		US-			

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	1		
	2		
	3		
	4		
	5		

Examiner Signature		Date Considered	3/10/03
--------------------	--	-----------------	---------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 18 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

DEC 10 2002  
PTO & TRADE  
OFFICE

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		<b>Complete if Known</b>			
		Application Number	09/995,897		
		Filing Date	November 28, 2002)		
		First Named Inventor	Piere MOURAD, et al.		
		Art Unit	3737		
Examiner Name					
Sheet		of		Attorney Docket Number	12500.2001U

RECEIVED

DEC 12 2002

TECHNOLOGY CENTER R3700

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
ad		US-6,110,114	Aug. 29, 2000	Nock, et al.	
ad		US-6,042,545	Mar. 28, 2000	Hossack, et al.	
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	1		
	2		
	3		
	4		
	5		

Examiner Signature		Date Considered	3/10/3
-----------------------	---	--------------------	--------

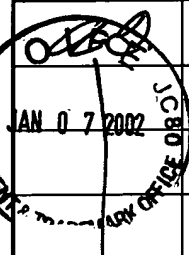
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Form PTO-1449	U.S. Department of Commerce Patent and Trademark Office	ATTY DOCKET NO.: 12500.2001U APPLICATION NO. : 09/995,897 APPLICANT : Pierre Mourad, et al. FILING DATE : November 28, 2001 GROUP : Unassigned
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)		

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	6 1 2 9 6 8 2	10 Oct. 2000	Borchert, et al.	600	561	11 Feb. 1998
	AB	6 0 8 6 5 3 3	11 Jul. 2000	Madson, et al.	600	438	12 Jun. 1998
	AC	6 0 6 6 0 9 7	23 May 2000	Glenn, et al.	600	443	22 Oct. 1997
	AD	6 0 4 2 5 5 6	28 Mar. 2000	Beach, et al.	601	3	4 Sept. 1998
	AE	6 0 3 9 6 9 1	21 Mar. 2000	Walker, et al.	600	452	29 May 1998
	AF	6 0 2 0 6 7 5	1 Feb. 2000	Yamashita, et al.	310	358	11 Mar. 1998
	AG	6 0 3 9 6 9 1	21 Mar. 2000	Walker, et al.	600	452	29 May 1998
	AH	5 9 5 1 4 7 6	14 Sep. 1999	Beach	600	437	14 Nov. 1997
	AI	5 9 5 1 4 7 7	14 Sep. 1999	Ragauskas, et al.	600	438	11 Sep. 1997
	AJ	5 9 2 1 9 2 8	13 Jul. 1999	Greenleaf, et al.	600	437	16 Oct. 1997
<i>Ad.</i>	AK	5 9 1 9 1 4 4	6 Jul. 1999	Bridger, et al.	600	561	6 May 1997

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATE YES NO
<i>Ad.</i>	AL	0 0 6 8 6 4 7	16 Nov. 2000	WO	G01F		X
<i>Ad.</i>	AM	0 0 5 7 7 6 6	05 Oct. 2000	WO	A61B		X
	AN						
	AO						
	AP						

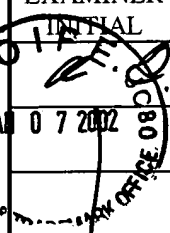
## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

<i>Ad.</i>	AR	CZOSNYKA, Marek Ph.D., et al., "Monitoring of Cerebral Autoregulation in Head-Injured Patients," <i>Stroke</i> , Vol. 27, No. 10, pp. 1829-1834 (October 1996)
<i>Ad.</i>	AS	NICHOLS, John S., et al., "Detection of Impaired Cerebral Autoregulation Using Spectral Analysis of Intracranial Pressure Waves," <i>Journal of Neurotrauma</i> , Vol. 13, No. 8, pp. 439-456 (1996)
<i>Ad.</i>	AT	DALEY, M.L., et al., "Correlation Coefficient Between Intracranial and Arterial Pressures: A Gauge of Cerebral Vascular Dilation," <i>Acta Neurochir</i> , [Suppl] Vol. 71, pp. 285-288 (1998)
EXAMINER	<i>3/10/3 Ali Samir</i>	
DATE CONSIDERED	<i>3/10/3</i>	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449	U.S. Department of Commerce Patent and Trademark Office	ATTY DOCKET NO.: 12500.2001U APPLICATION NO.: 09/995,897 APPLICANT: Pierre Mourad, et al. FILING DATE: November 28, 2001 GROUP: Unassigned
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)		


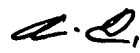
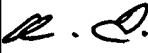

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	BA	5 9 1 6 1 7 1	29 Jun. 1999	Mayevsky	600	476	27 May 1997
	BB	5 9 0 3 5 1 6	11 May 1999	Greenleaf, et al	367	92	2 Dec. 1996
	BC	5 8 7 3 8 4 0	23 Feb. 1999	Neff	600	561	21 Aug. 1997
	BD	5 8 4 0 0 1 8	24 Nov. 1998	Michaeli	600	300	28 May 1997
	BE	5 8 3 6 8 9 4	17 Nov. 1998	Sarvazyan	600	587	10 Jun. 1997
	BF	5 8 3 0 1 3 1	3 Nov. 1998	Caro, et al.	600	300	22 Nov. 1995
	BG	5 8 1 0 7 3 1	22 Sep. 1998	Sarvazyan, et al.	600	438	4 Mar. 1997
	BH	5 8 0 7 2 5 0	15 Sep. 1998	Ohtomo, et al.	600	407	10 Apr. 1996
	BI	5 8 0 6 5 2 1	15 Sep. 1998	Morimoto, et al.	128	661	26 Mar. 1996
	BJ	5 7 4 9 3 6 4	12 May 1998	Sliwa, Jr., et al.	128	662.02	21 Jun. 1996
	BK	5 6 8 5 3 1 3	11 Nov. 1997	Mayevsky	128	665	31 May 1994

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATE YES NO
	BL						
	BM						
	BN						
	BO						
	BP						

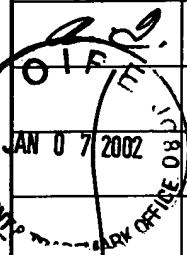
## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

	BR	FERGUSON, John, "The Promise of Portable MRI," <i>California Institute of Technology - Engineering and Science</i> , Vol. LXIV, No. 2, pp. 28-33 (Nov. 2, 2001)
	BS	WAYENGERG, J.-L., "Non-Invasive Measurement of Intracranial Pressure in neonates and Infants: Experience with the Rotterdam Teletransducer," <i>Acta Neurochir</i> , [Suppl] Vol. 71, pp. 70-73 (1998)
	BT	NIGHTINGALE, Kathryn R., et al., "On the Feasibility of Remote Palpation Using Acoustic Radiation Force," <i>J. Acoust. Soc. Am.</i> , Vol. 110, No. 1, pp. 625-634 (July 2001)
EXAMINER		
	DATE CONSIDERED	3/10/03

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449	U.S. Department of Commerce Patent and Trademark Office	ATTY DOCKET NO.: 12500.2001U APPLICATION NO. : 09/995,897 APPLICANT : Pierre Mourad, et al. FILING DATE : November 28, 2001 GROUP : Unassigned
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)		

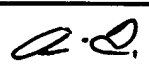



## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	CA	5 6 7 8 5 6 5	21 Oct. 1997	Sarvazyan	128	774	27 Feb. 1996
	CB	5 6 1 7 8 7 3	8 Apr. 1997	Yost, et al.	128	748	23 May 1995
	CC	5 6 0 6 9 7 1	4 Mar. 1997	Sarvazyan	128	660	13 Nov. 1995
	CD	5 5 7 9 7 7 4	3 Dec. 1996	Miller, et al.	128	667	7 Mar. 1994
	CE	5 5 2 4 6 3 6	11 Jun. 1996	Sarvazyan, et al.	128	774	21 Dec. 1992
	CF	5 4 1 1 0 2 8	2 May 1995	Bonnefous	128	661.08	21 Dec. 1993
	CG	5 3 8 8 5 8 3	14 Feb. 1995	Raguauskas, et al.	128	661.05	1 Sep. 1993
	CH	R E 3 4 6 6 3	19 Jul. 1994	Seale	128	774	3 Mar. 1989
	CI	5 2 4 1 9 6 4	7 Sep. 1993	McQuilkin	128	672	31 Oct. 1990
	CJ	5 1 1 7 8 3 5	2 Jun. 1992	Mick	128	748	30 Aug. 1991
	CK	5 0 9 9 8 4 8	31 Mar. 1992	Parker, et al.	128	661.07	2 Nov. 1990

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATE YES NO
	CL						
	CM						
	CN						
	CO						
	CP						

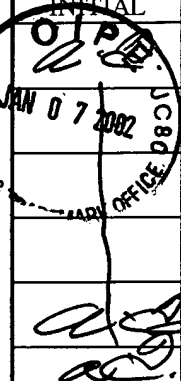
## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

	CR	FRY, F. J., et al., "Threshold Ultrasonic Dosages for Structural Changes in the Mammalian Brain," <i>J. Acoust. Soc. Am.</i> , Vol. 48, No. 6 (Part 2), pp. 1413-1417 (May 1970)
	CS	DAVIES, Iolo ab Ithel, et al., "Application of Focused Ultrasound for Research on Pain," <i>Pain</i> , Vol. 67, pp. 17-27 (1996)
	CT	PARKER, Kevin J., Ph.D., "Sonoelasticity Imaging," <a href="http://www.ee.Rochester.edu:8080/projects/sonoelasticity/patents.html">http://www.ee.Rochester.edu:8080/projects/sonoelasticity/patents.html</a> , (printed 10.17.00)
EXAMINER		
DATE CONSIDERED	3/10/3	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449	U.S. Department of Commerce Patent and Trademark Office	ATTY DOCKET NO.: 12500.2001U APPLICATION NO. : 09/995,897 APPLICANT : Pierre Mourad, et al. FILING DATE : November 28, 2001 GROUP : Unassigned
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)		

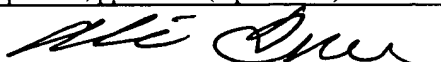
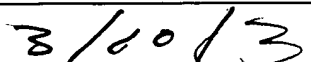
## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	DA	5 0 8 6 7 7 5	11 Feb. 1992	Parker, et al.	128	660	2 Nov. 1990
	DB	5 0 7 4 3 1 0	24 Dec. 1991	Mick	128	748	30 Jul. 1991
	DC	4 9 8 4 5 6 7	15 Jan. 1991	Kageyama, et al.	128	660.02	17 Apr. 1989
	DD	4 7 7 1 7 9 2	20 Sep. 1988	Seale	128	774	16 Oct. 1986
	DE	4 0 4 3 3 2 1	23 Aug. 1977	Soldner, et al.	128	2 V	17 Mar. 1975
	DF	3 8 7 2 8 5 8	25 Mar. 1975	Hudson, et al.	128	2 V	8 Aug. 1973
	DG						
	DH						
	DI						
	DJ						
	DK						

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATE YES NO
	DL						
	DM						
	DN						
	DO						
	DP						

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

	DR	SUJIMOTO, Tsuneyhoshi et al., "Tissue Hardness Measurement Using the Radiation Force of Focused Ultrasound," <i>Tokyo Institute of Technology, Research Laboratory of Precision Machinery and Electronics Ultrasonics Symposium</i> , pp. 1377-1380 (1990)
	DS	BRAUKUS, Michael et al., "NASA Tests Painless Ways of Measuring Intracranial Pressure," <a href="http://www.qadas.com/qadas/nasa/nasa-hm/0092.html">http://www.qadas.com/qadas/nasa/nasa-hm/0092.html</a> (printed 10.03.00)
	DT	FATEMI, Mostafa et al., "Ultrasound-Stimulated Vibro-Acoustic Spectrography," <i>Science</i> , Vol. 280, No. 3, pp. 82-85 (April 1998)
EXAMINER		
	DATE CONSIDERED	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449	U.S. Department of Commerce Patent and Trademark Office	ATTY DOCKET NO.: 12500.2001U APPLICATION NO. : 09/995,897 APPLICANT : Pierre Mourad, et al. FILING DATE : November 28, 2001 GROUP : Unassigned
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)		

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	DA	5 0 8 6 7 7 5	11 Feb. 1992	Parker, et al.	128	660	2 Nov. 1990
	DB	5 0 7 4 3 1 0	24 Dec. 1991	Mick	128	748	30 Jul. 1991
	DC	4 9 8 4 5 6 7	15 Jan. 1991	Kageyama, et al.	128	660.02	17 Apr. 1989
	DD	4 7 7 1 7 9 2	20 Sep. 1988	Seale	128	774	16 Oct. 1986
	DE	4 0 4 3 3 2 1	23 Aug. 1977	Soldner, et al.	128	2 V	17 Mar. 1975
	DF	3 8 7 2 8 5 8	25 Mar. 1975	Hudson, et al.	128	2 V	8 Aug. 1973
	DG						
	DH						
	DI						
	DJ						
	DK						

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATE YES NO
	DL						
	DM						
	DN						
	DO						
	DP						

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

DR	SCHMIDT, Bernhard et al., "Noninvasive Prediction of Intracranial Pressure Curves Using Transcranial Doppler Ultrasonography and Blood Pressure Curves," <i>Stroke</i> , Vol. 28, No. 12, pp. 2465-2472 (December 1997)
DS	IBM Technical Disclosure Bulletin, "Noninvasive Pressure Measurement," <a href="http://www.delphion.com/tdbs/tdb?&amp;order+78A=00387">http://www.delphion.com/tdbs/tdb?&amp;order+78A=00387</a> (printed 11.22.00)
DT	M. CZOSNYKA, P., et al., "Continuous Monitoring of Cerebrovascular Pressure-Reactivity in Head Injury," <i>Acta Neurochir</i> , [Suppl] Vol. 71, pp. 74-77 (1998)
EXAMINER	DATE CONSIDERED 3/10/03

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.